

SCAFFOLDING TASK: "THE ISLAND HOP!"

STANDARDS FOR MATHEMATICAL CONTENT

MCC.3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.

STANDARDS FOR MATHEMATICAL PRACTICE

1. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
6. Attend to precision.
8. Look for and express regularity in repeated reasoning.



BACKGROUND KNOWLEDGE

"To round a number simply means to substitute a nice number that is close, so that some computation can be done more easily." Rounding is used to simplify computation in a story, chart or conversation. For example, if you are talking about the amount of time it takes you to do homework, most people will not say 57 minutes, they will say about an hour. The first number is a precise amount of time. The second number refers to an approximate amount of time for better communication. (Van de Walle p. 47)

ESSENTIAL QUESTIONS

- How are digits in a number related?
- What can we learn about the value of a number by examining its digits?
- What is an effective way to estimate numbers?

MATERIALS

- Sidewalk Chalk
- Number line, or 0-99 chart

GROUPING

Students should work in groups of 3 or 4.

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

Part I

The teacher will begin the lesson outside on the sidewalk. S/he will introduce the decade numbers. The teacher may have the students count by 10s to 100. As the students are counting

the teacher will use sidewalk chalk to draw “islands” on the side walk. Be sure to leave enough room in between each decade number to make the tick marks for the numbers in between.

Next, the class will discuss what can go in between the decade numbers. Have the groups of students, using sidewalk chalk, record the numbers that are in between the decade numbers. *Please note that the measurement between the numbers will probably not be equal. As long as they do not skip any numbers it should be fine.*

The teacher will now set the stage for rounding. You can start by asking a series of questions:

- What is estimating?
- Does anyone know why we estimate?

Explain to the students that today they will learn a new estimation strategy. They are going to round to the nearest 10. “Let’s look at the islands with the decade numbers, what do you notice?” Students may respond with things like, the islands count by 10s, or they are decade numbers.

When rounding, you are looking for nice numbers like the decade numbers. Ask a student to stand on a number such as 43. The student will locate 43 on the number line and stand there. The teacher will lead the students into a discussion about the nearest decade number. They can even walk/hop to the closest island by counting the steps. Continue this with other students allowing them gain an understanding of the nearest “nice number”. Please avoid teaching such things as, “5 or higher, and 4 or lower”. We want students to conceptualize the rounding and not memorize rules. Allow students to grapple with and discuss this in order to develop a deeper understanding.

Part II

Students will use the “Island Hop” Scavenger Hunt task sheet to answer questions about rounding. Students should use a number line (cut the attached 0-99 chart to create) or use the 0-99 chart to complete the task.

FORMATIVE ASSESSMENT QUESTIONS

- How do you determine the closest 10?
- Have you found all of the possible answers? Explain.
- When might rounding be useful?
- Can you create an additional number clue?

DIFFERENTIATION

Extension

- Have students practice rounding to the nearest ten using three-digit numbers.

Intervention

- Students can work with only 2 decade numbers at a time. They could use counters to mark their spots.

0-99 Chart

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

Name _____ Date _____



THE ISLAND HOP SCAVENGER HUNT

1. I am a number that rounds to 40. What can I be? Could I be another number? Justify your thinking.

2. I am a number that rounds to 90. What can I be? Could I be another number? Justify your thinking.

3. I am a number that rounds to thirty. One of my digits is 2. What number am I? Could I be another number? Justify your thinking.

4. I am a number that rounds to 60. What can I be? Could I be another number? Justify your thinking.

5. Jalynn told Tameka that she has about 50 stickers. Tameka has 48 stickers. Knowing that Jaylynn rounded her total, is it possible that Tameka has more stickers than Jalynn? Justify your thinking using words, pictures and numbers.

6. Jay has ~~about~~ 70 baseball cards. Mark has 72 baseball cards. Is it possible for Jay to have more baseball cards than Mark? Justify your thinking using words, pictures, and numbers.